

a second semiconductor chip having an electrode terminal:

a bump made of a first metal for joining said first and second semiconductor chips, said bump being provided on at least one of said electrode terminal of said first semiconductor chip and said electrode terminal of said second semiconductor chip; and

an alloy layer formed on said bump where said first and second semiconductor chips are joined with each other via said bump, said alloy layer being made of an alloy of said first metal and a second metal,

wherein said second metal is made of such a metal that can melt at a temperature lower than a melting point of said first metal and be alloyed with said first metal.

2. (Amended) A semiconductor device comprising:

a first semiconductor chip having an electrode terminal:

a second semiconductor chip having an electrode terminal:

a bump made of a first metal for joining said first and second semiconductor chips, said bump being provided on at least one of said electrode terminal of said first semiconductor chip and said electrode terminal of said second semiconductor chip; and

a third metal layer having a lower melting point than that of said first metal provided on said bump where said first and second semiconductor chips are joined with each other via said bump

3. (Amended) A semiconductor device comprising:

a first semiconductor chip having an electrode terminal:

a second semiconductor chip having an electrode terminal:

a bump made of a first metal for joining said first and second semiconductor chips, said bump being provided on at least one of said electrode terminal of said first semiconductor chip and said electrode terminal of said second semiconductor chip; and

a detachable material portion provided on said bump where said first and

second semiconductor chips are joined with each other via said bump, said detachable material being made of such a material that said first and second semiconductor chips can be easily separated from each other at a temperature of 280(C to 500(C.

4. (Amended) The semiconductor device according to claim 1, 2, or 3, wherein said bump is formed on said electrode terminal of each of said first and second semiconductor chips, so that bumps of said first and second semiconductor chips are joined to each other.

5. (Amended) The semiconductor device according to claim 1, 2, or 3, wherein said bump is formed on said electrode terminal of one of said first and second semiconductor chips and a metal layer made of said first metal is formed on said electrode terminal of the other of said first and second semiconductor chips, so that said bump and said electrode terminal are joined to each other.

6. (Twice Amended) The semiconductor device according to claim 1 or 2, wherein a second metal layer made of said second metal or said third metal layer is provided on a right surface and a side surface of said bump made of said first metal, so that said first and second semiconductor chips are joined to each other via said alloy layer or via said third metal layer.

10. (Amended) A semiconductor device comprising:
a first semiconductor chip having an electrode terminal or wiring;
a second semiconductor chip having an electrode terminal or wiring; and
a low-melting point metal layer provided on the surface of said electrode terminal or wiring of at least one of said first and second semiconductor chips,
wherein said first and second semiconductor chips are electrically interconnected and joined to each other via said low-melting-point metal layer so that said electrode terminal or wiring of the first semiconductor chip is face to face with said electrode terminal or wiring of the second semiconductor chip.

12. (Twice Amended) The semiconductor device according to claim 10,

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further comprising:

an insulating layer provided between said wiring and a passivation film on the surface of said semiconductor chip to flatten the surface of said wiring.

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18. (Twice Amended) The semiconductor device according to claim 1 or 2, further comprising:

an insulating resin layer provided at a gap between said first and second semiconductor chips joined each other to fill the gap, said insulating resin layer having nearly the same elastic modulus as said bump.

Please add claim 25 as follows:

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-- 25. (NEW) The semiconductor device according to claim 1, 2, or 3 wherein said bump is formed on said electrode terminal of one of said first and second semiconductor chips and a wiring is formed so as to be connected with said electrode terminal of the other of said first and second semiconductor chips, so that said bump and said wiring are joined to each other.--

REMARKS

Claims 1-20 and 25 are pending in the application. By this Amendment, claims 21-24 are canceled without prejudice or disclaimer and claims 1-3, 10 and 12 are amended and claim 25 is added.

The drawing figures are objected to under 37 CFR 1.83 (a). The claims are amended to delete "joining portion". It is respectfully submitted that the "detachable material" is illustrated as "alloy layer 3". As result, it is respectfully submitted that all of the claimed features specified in the claims are illustrated in the drawing. Withdrawal of the objection is respectfully requested.

The specification is objected to because the title of the invention is allegedly not descriptive. The title of the invention is changed as indicated above to obviate the objection. Withdrawal of the objection is respectfully requested.

Claims 1, 2, 3, 10 and 12 are rejected under 35 U.S.C. 112, second paragraph. The claims are amended to obviate the rejection. The Office Action states that the use